

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9. (Canceled)

10. (Withdrawn) A method for producing a hydrogen storage material comprising:
arranging a planar molecular layer material and a metal material at different places in a vacuum chamber, followed by sealing the chamber; and
controlling the temperatures of the planar molecular layer material and the metal material, independently, to insert a metal atom constituting the metal material between planar molecular layers constituting the planar molecular layer material.
11. (Withdrawn) The method for producing a hydrogen storage material of claim 10,
wherein a planar molecule constituting the planar molecular layer material is primarily formed of carbon.
12. (Withdrawn) The method for producing a hydrogen storage material of claim 10,
wherein the metal material is an alkaline metal.
13. (Withdrawn) The method for producing a hydrogen storage material of claim 12,
wherein the alkaline metal is at least one of potassium, rubidium, and cesium.
14. (Withdrawn) The method for producing a hydrogen storage material of claim 10,
wherein a planer molecule constituting the planar molecular layer material contains a metal element.
15. (Withdrawn – Currently Amended) The method for producing a hydrogen storage material of claim 14,
wherein the metal element is at least one of scandium, titanium, vanadium, chromium, manganese, iron, cobalt, nickel, copper, zinc, gallium, aluminum ~~aluminium~~, potassium, rubidium, and cesium.

16. (Currently Amended) A hydrogen storage tank, comprising:

a hydrogen storage material comprising: graphite which is formed of a plurality of graphenes stacked and a particle which is inserted between the graphenes to define an interlayer distance between the graphenes and is chemically bound to the graphenes; and
a metal tank body which houses the hydrogen storage material. ~~including a plurality of planar molecular layers stacked, and a particle being inserted into the planar molecular layers to define an interlayer distance between the planar molecular layers.~~

17. (Currently Amended) A hydrogen storage system, comprising:

a hydrogen storage tank according to claim 16. ~~including a hydrogen storage material which has a plurality of planar molecular layers stacked, and a particle being inserted into the planar molecular layers to define an interlayer distance between the planar molecular layers.~~

18. (Currently Amended) A fuel cell vehicle, comprising:

a hydrogen storage system according to claim 17. ~~comprising a hydrogen storage tank including a hydrogen storage material which has a plurality of planar molecular layers stacked, and a particle being inserted into the planar molecular layers to define an interlayer distance between the planar molecular layers.~~

19. (New) The hydrogen storage tank of claim 16, wherein the particle comprises at least one of an atom and a molecule.

20. (New) The hydrogen storage tank of claim 16, wherein the interlayer distance between the graphenes, in a condition in which hydrogen is stored in the hydrogen storage tank, is 0.8 to 1.2 nm.

21. (New) The hydrogen storage tank of claim 16, wherein the particle comprises an alkaline metal atom.

22. (New) The hydrogen storage tank of claim 21, wherein the alkaline metal atom comprises at least one of potassium, rubidium, and cesium.

23. (New) The hydrogen storage tank of claim 16, wherein a metal element selected from the group consisting of scandium, titanium, vanadium, chromium, manganese, iron, cobalt,

nickel, copper, zinc, gallium, aluminum, potassium, rubidium and cesium is inserted into the graphene.

24. (New) The hydrogen storage tank of claim 16, wherein a plurality of the particles are arranged along a direction perpendicular to a planar direction of the graphenes so that the interlayer distance between the graphenes, in a condition in which hydrogen is stored in the hydrogen storage tank, is 0.8 to 1.2 nm.

25. (New) The hydrogen storage tank of claim 16, further comprising a filter which prevents leakage of the hydrogen storage material from the hydrogen storage tank.

26. (New) The hydrogen storage tank of claim 16, wherein the interlayer distance is 0.5 to 0.6 nm in a condition in which hydrogen is not stored in the hydrogen storage tank; and
wherein the interlayer distance is 0.8 to 1.2 nm in a condition in which hydrogen is stored in the hydrogen storage tank.

27. (New) The hydrogen storage tank of claim 16, wherein a single layer of particles is arranged between the graphenes in a condition in which hydrogen is not stored in the hydrogen storage tank; and

wherein a plurality of particles are arranged along a direction perpendicular to a planar direction of the graphenes in a condition in which hydrogen is stored in the hydrogen storage tank.

28. (New) The hydrogen storage tank of claim 20, wherein the interlayer distance is 1.0 to 1.2 nm.

29. (New) The hydrogen storage tank of claim 24, wherein the interlayer distance is 1.0 to 1.2 nm.

30. (New) The hydrogen storage tank of claim 26, wherein the interlayer distance is 1.0 to 1.2 nm.